

CLAIMS

1.- A computer implemented method providing software viruses infection information in real time, the method comprising following steps:

- 5 a) providing a computer virus utility program to a plurality of users distributed around different locations each of them operating at least one local computer;
- b) obtaining information about geographical location of each of said local computers;
- c) carrying out, using said computer virus utility program, at least a computer virus search or scanning operation covering at least a part of at least one hard disk of
10 said local computer or at least a part of a unit supporting information connected or connectable to said local computer;
- d) issuing a report containing the results of said computer virus search or scanning operation on said local computer and making available the results of said report through a communication network along with at least data of said geographical
15 location of said local computer, to a center;
- e) processing at said center a plurality of reports received from different local computers and allocating said detected computer viruses in geographical areas; and
- f) making available information about at least the most active computer virus at a
20 given time in a series of selectable geographical areas corresponding to said different locations of step a).

2.- A computer implemented method, according to claim 1, wherein said step a) of providing said computer virus utility program is carried out on line or off line.

25 3.- A computer implemented method, according to claim 1, wherein said steps a) and b) are performed sequentially at any given order.

4.- A computer implemented method, according to claim 1, wherein said computer virus utility program is an anti-virus software.

30 5.- A computer implemented method, according to claim 4, wherein if any computer virus is detected a virus cleaning and file and system repair operation is performed at least on a scanned part of the computer providing said detection.

6.- A computer-implemented method, according to claim 1, wherein said information made available at step f) is periodically updated.

35 7.- A computer implemented method, according to claim 1, wherein said information provided at step f) is made available to any user of a computer through a communication network.

8.- A computer implemented method, according to claim 1, wherein said information provided at said step d) further includes the number of times that a detected virus appears in said computer detection operation of step c).

5 9.- A computer implemented method, according to claim 1, wherein said information provided at said step f) further includes the percentage of infected computers at a selected geographical area.

10 10.- A computer implemented method, according to claim 1, wherein said information provided at said step f) further includes a trend of spread of some of said most active detected computer virus at any given geographical area during an immediate preceding period of time.

11.- A computer implemented method, according to claim 1, wherein said computer virus search or scanning operation of step c) is performed after a request of permission to said user.

15 12.- A computer implemented method, according to claim 1, wherein said report issued at step d), also includes a definite time when said at least a computer virus search or scanning operation is performed.

13.- A computer implemented method, according to claim 1, wherein said making available the result of said report at step d) to a center is done preserving anonymity of said user.

20 14.- A computer implemented method, according to claim 1, wherein said step c) is performed on the whole of said at least one hard disk or on the whole of all hard disks of said local computer that can be selected by said user.

15.- A computer implemented method according to claim 1, wherein said step c) is performed on an area interchanging messages of said local computer.

25 16.- A computer implemented method, according to claim 1, wherein said step c) is carried out on one or more files of said local computer.

30 17.- A computer implemented method, as claimed in claim 1, wherein said step c) also includes an heuristic exploration of said local computer in order to detect some files suspected to be infected, the results being also included as suspected files in said issued report.

18.- A computer implemented method, as claimed in claim 1 wherein said report issued at step d) further includes the definite time at which said report issued at step d) was sent by said center.

35 19.- A computer implemented method, as claimed in claim 1 wherein said report issued at step d) further includes the definite time at which the virus search or scanning operation ended.

20.- A computer implemented method, as claimed in claim 1 wherein said step e) further includes evaluate for each of said geographical areas the number, name and degree of spreading of detected computer viruses or files and number of them suspected to be infected.

5 21.- A computer implemented method, as claimed in claim 1, wherein said plurality of local computers are distributed around a wide geographical area.

22.- A computer implemented method, as claimed in claim 21, wherein said plurality of local computers are distributed around the world.

10 23.- A computer implemented method, as claimed in any of the previous claims, wherein said communication network is a global network such as the Internet.

24.- .- A computer implemented method, as claimed in any of the previous claims, wherein said communication network is a particular network such as a large company network.

15 25.- A computer implemented method, as claimed in claim 5, wherein said computer virus search or scanning operation of step c) comprises removing the detected computer virus from an infected file or files so that the file can be used again.

26.- A computer implemented method, as claimed in claim 5, wherein said computer virus search or scanning operation of step c) comprises quarantining the infected file or files.

20 27.- A computer implemented method, as claimed in claim 5, wherein said computer search or scanning operation of step c) comprises repair the adverse effects of the computer virus in the infected computer.

25 28.- A computer implemented method, as claimed in claim 5, wherein said computer virus search or scanning operation of step c) comprises remove an infected file or files.

29.- A computer implemented method, as claimed in claim 1, wherein said computer virus utility program is periodically updated including special anti-virus tools to fight against reported new active computer virus detected.

30 30.- A computer implemented method, as claimed in claim 1, wherein said computer virus utility program loaded in said local computers includes a communication program.

31.- A computer implemented method, as claimed in claim 30, wherein said issued reports are being sent using said communication program.

35 32.- A computer implemented method, as claimed in claim 1, wherein in addition to the geographical location of said local computers, information about the

computer operating system of said local computers is included in the issued reports of step d).

5 33.- A computer implemented method, as claimed in claim 1, wherein said issued reports include in addition to the number and name of computer virus found, the number and kind of files infected.

34.- A computer implemented method, as claimed in claim 6, wherein said periodically updated information of step f) is renewed and issued as soon as new batches of reports from any particular geographical area are processed by said center at step e).

10 35.- A computer implemented method, as claimed in claim 6, wherein said periodically updated information of step f) is renewed each predetermined period of time.

36.- A computer implemented method, as claimed in claim 1, wherein said process of step e) at said center includes statistic operations of the data from the plurality of issued reports received.

15 37.- A computer implemented method, as claimed in claim 1, wherein said information of said step f) is provided from a Website.

38.- A computer implemented method, as claimed in claim 37, wherein said Website is a site further providing anti-virus tools for the users.

20 39.- A computer implemented method, as claimed in claim 37 or 38, wherein in case a very active computer virus being detected an alarm is generated to the users through said Website.

40.- A computer implement method, as claimed in claim 37 or 38, wherein a Web browser is used to reach said Website in order to obtain said information or to download a computer virus utility program.

25 41.- A computer implement method, as claimed in claim 37 or 38, wherein a special software utility program is used to reach said Website in order to obtain said information.

42.- A computer implement method, as claimed in claim 2, wherein said on line provision involves downloading a computer virus utility program from a site of a remote provider.

30 43.- A computer implement method, as claimed in claim 42, wherein said downloaded computer virus utility program resides only temporally in said local computers.

44.- A computer implement method, as claimed in claim 42, wherein said downloaded computer virus utility program resides permanently in said local computers.